

Bellwork: 1/8/13

Solve using the quadratic formula:

$$y = x^2 - 6x + 3$$

$$0 = x^2 - 6x + 3$$

$$a = 1 \quad b = -6 \quad c = 3$$

$$\begin{array}{r} 24 \\ 12 \quad 2 \\ 6 \quad 2 \\ 3 \quad 2 \end{array}$$

$$\frac{6 \pm \sqrt{(-6)^2 - 4(1)(3)}}{2(1)}$$

$$\frac{6 \pm \sqrt{24}}{2}$$

$$\frac{6 \pm 2\sqrt{6}}{2}$$

$$\boxed{3 \pm \sqrt{6}}$$

$$\begin{array}{cc} 3 + \sqrt{6} & 3 - \sqrt{6} \\ (5.4, 0) & (.6, 0) \end{array}$$

Page 1

$$\textcircled{11} \quad x^2 - 4x + 3 = 0$$

$$(x-3)(x-1) = 0$$

$$x-3=0 \quad x-1=0$$

$$x = 3, 1$$

$$(4 + \sqrt{4}) / 2$$

$$4 + \sqrt{4} \text{ enter}$$

$$/ 2 \text{ enter}$$

$$a = 1 \quad b = -4 \quad c = 3$$

$$\frac{4 \pm \sqrt{(-4)^2 - 4(1)(3)}}{2(1)}$$

$$\frac{4 \pm \sqrt{4}}{2} \quad \frac{4 \pm 2}{2}$$

$$\frac{4+2}{2} = 3$$

$$\frac{4-2}{2} = 1$$

Page 2

$(14) \quad 3x^2 + 2x - 1 = 0$ -3
 $a=3 \quad b=2 \quad c=-1$
 $(3x^2 + 2x)(-1x - 1) = 0$ $\frac{-2 \pm \sqrt{(2)^2 - 4(3)(-1)}}{2(3)}$
 $3x(x+1) - 1(x+1) = 0$
 $(3x-1)(x+1) = 0$ $\frac{-2 \pm \sqrt{16}}{6}$
 $3x-1=0 \quad x+1=0$
 $\boxed{x = \frac{1}{3} \quad x = -1}$ $\frac{-2 + \sqrt{16}}{6}$ $\frac{-2 - \sqrt{16}}{6}$
 $(\frac{1}{3}, 0) \quad (-1, 0)$ $\frac{-2 + \sqrt{(16)}}{6}$

Page 3

$3x^2 = 2(2x+1)$ $a=3 \quad b=-4 \quad c=-2$
 $3x^2 = 4x + 2$
 $-4x \quad -2$
 $3x^2 - 4x - 2 = 0$ $\frac{4 \pm \sqrt{(-4)^2 - 4(3)(-2)}}{2(3)}$
 $\frac{4 \pm \sqrt{40}}{6}$
 -6
 $\frac{4 \pm 2\sqrt{10}}{6}$ $\frac{4 + \sqrt{40}}{6}$ $\frac{4 - \sqrt{40}}{6}$
 $\boxed{\frac{2 \pm \sqrt{10}}{3}}$ $(1.7, 0)$ $(-0.4, 0)$

Page 4

$$(20) \quad 2x(x-1) = 3 \quad a=2 \quad b=-2 \quad c=-3$$

$$2x^2 - 2x = 3$$

$$2x^2 - 2x - 3 = 0$$

$$\frac{2 \pm \sqrt{(-2)^2 - 4(2)(-3)}}{2(2)}$$

$$\frac{2 \pm \sqrt{28}}{4}$$

$$\frac{2 \pm 2\sqrt{7}}{4}$$

$$\begin{array}{r} 28 \\ 4 \overline{) 28} \\ \underline{28} \\ 0 \end{array}$$

$$\boxed{\frac{1 \pm \sqrt{7}}{2}}$$

$$\frac{1 + \sqrt{7}}{2}$$

$$(1.8, 0)$$

$$\frac{1 - \sqrt{7}}{2}$$

$$(-.8, 0)$$

$$2 + \sqrt{28} \text{ enter}$$

$$/ 4 \text{ enter}$$

Homework: Worksheet 5.7

#16-2

